

# Chart of size and measures of atoms.

Ferman's table of the elements.

Of ferman: Fernando Mancebo Rodriguez 1992

## Simple formula.

Warning: This chart is obtained by mean of my Atomic Model.

The simplest formula to obtain the dimensions of atoms could be:

**Atomic diameter – Diámetro atómico**

*ferman*

$$D = \sqrt[6]{Aw} \quad \text{Astron. (10}^{-10} \text{ m.)}$$

Diameter              Atomic weight  
Peso atómico              Armstrong (10<sup>-10</sup> m.)

**General formula of atomic size** *ferman*

Atom Mass = Volume × Density

$$\frac{\text{Atomic Weight}}{\text{Atomic Mass Unit}} \times U = \frac{4 \pi R^3}{3} \times \pi \sqrt[6]{Aw}$$

-- From >>>

For example:

Uranium, atomic weight 238; ----- root-6th of 238 = 2,49 Astron. of diameter --- 1,245 of radius

Hydrogen, atomic weight 1; ----- root-6th of 1 = 1 Astron. of diameter ----- 0,5 of radius  
Iron, of atomic weight 56; ----- root-6th of 56 = 1,96 Astron. of diameter --- 0,98 of radius

Where we obtain the diameter of any element by mean of the sixth root of the atomic weight Aw, given in Armstrongs.

As we can deduce from the general formula: "In atoms their volume and atomic density grow proportionally to the square root of their atomic weight".

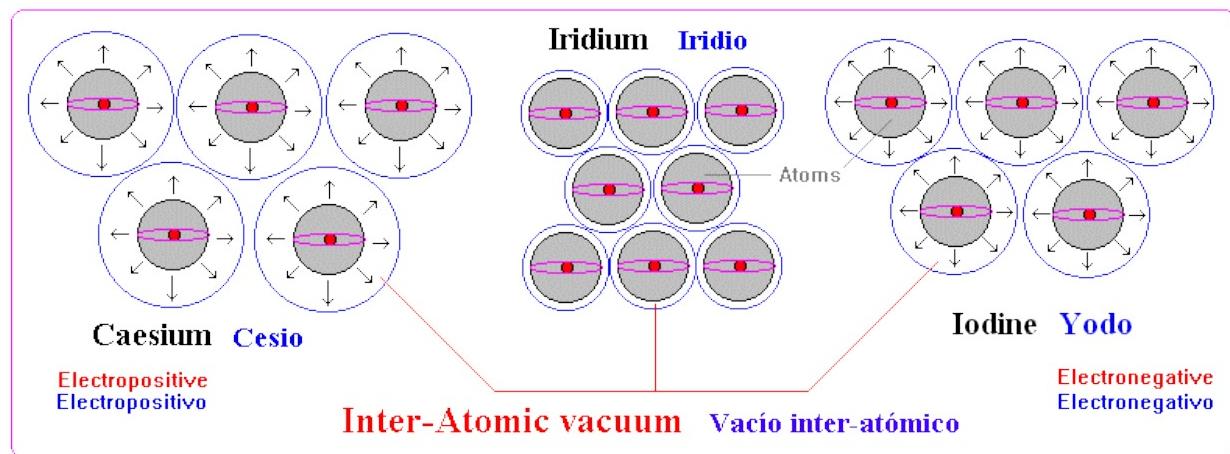
To see more about the formulas for the atomic dimensions, you can visit the web on mi Atomic Model.

Note.- The current measures on the atomic radii are erroneous (I think) since they don't take in mind the inter-atomic vacuum that separate atoms as for the structure of the last gravitational layer.

Say, in similar atoms their electronegative or electropositive potential produce rejection and make them to be more separate some from other ones; and the neutral potential allows them to be nearer and more cohesive, reason for which these elements are more dense, harder and heavier, as we can see in the rainbow table of the elements.

(For instance, the lithium atom with 3 electrons can not have bigger radius than the iridium atom with 77 potential electrons).

> In gases the inter-atomic vacuum is very big, although their atomic radii continue being the same ones.



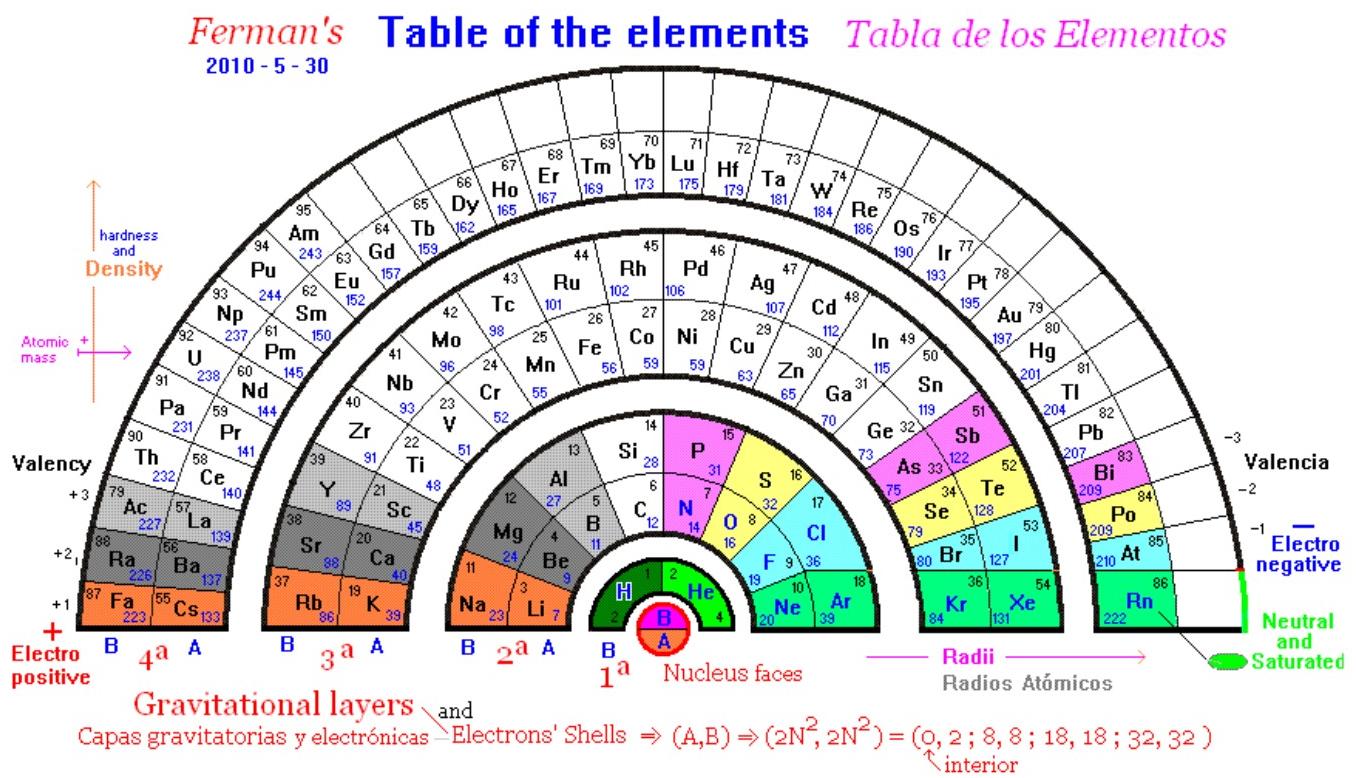
## Conclusion

Inwardly: The dimensions of atoms such as their atomic diameter, interior atomic density, etc., depend on their nuclear mass exclusively.

Outwardly: On the other hand, the dimensions and density of molecules and materials also depend on the interrelation among their atoms, keeping in mind the characteristics of their last gravitational layers (or valency) and on their magnetic fields because they fit the distance and situation that atoms must have inside these materials.

## "Rainbow" or physical table of the elements Electronic shells table of the elements

NOTE: This table is free to be used and reproduced with mention of its author.



Examples of distribution of shells of electrons:

Hydrogen ( 1 ); Helium ( 2 )

Carbon ( 2, 4, ); Neon ( 2, 8 )

Aluminium ( 2, 8, 3 ); Chlorine ( 2, 8, 7 ); Argon ( 2, 8, 8 )

Chromium ( 2, 8, 8, 6); Germanium ( 2, 8, 8, 14 ); Krypton ( 2, 8, 8, 18 )

Zirconium ( 2, 8, 8, 18, 4 ); Cadmium ( 2, 8 , 8, 18, 12 ); Xenon ( 2, 8, 8 ,18, 18 )

Barium ( 2, 8, 8, 18, 18, 2 ); Iridium ( 2, 8, 8, 18, 18, 23 ); Radon ( 2, 8, 8, 18, 18, 32 )

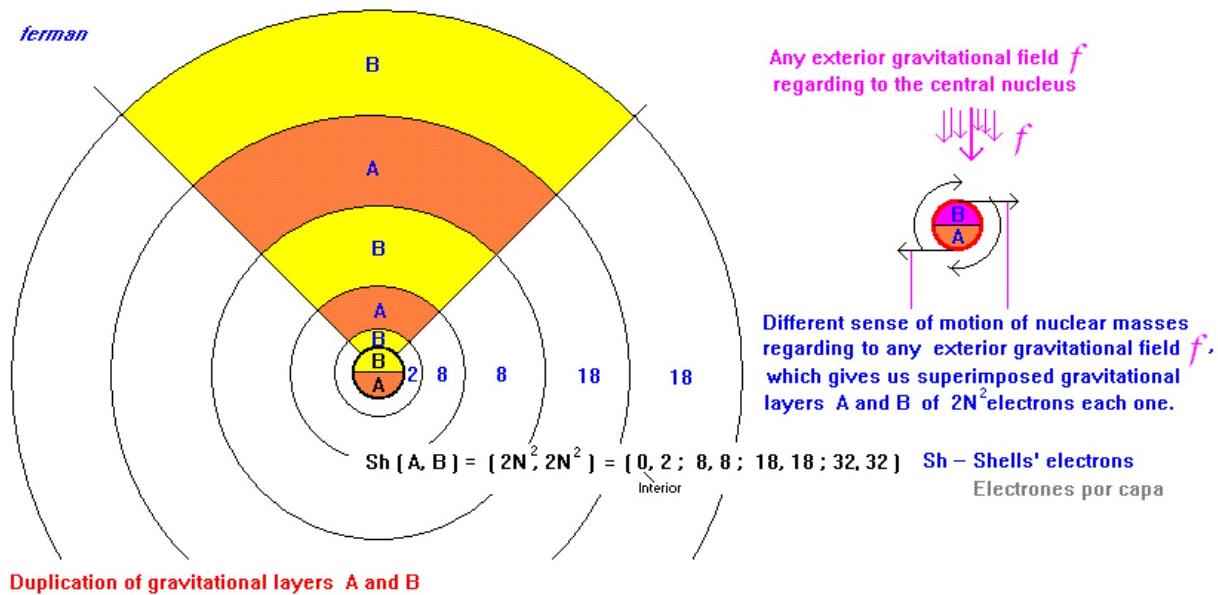
Uranium ( 2, 8, 8, 18, 18, 32, 6 )

\* As we can deduce from the tables of the elements, the Pascal's Triangle is not the correct method of electrons shells distribution, but the one of layers duplication ( A,B ) with  $2N^2$  electrons each one in ascending value. Shells ( A, B ) = (  $2N^2$ ,  $2N^2$  ).

### Gravitational layers A and B: (Rotational phase-shift)

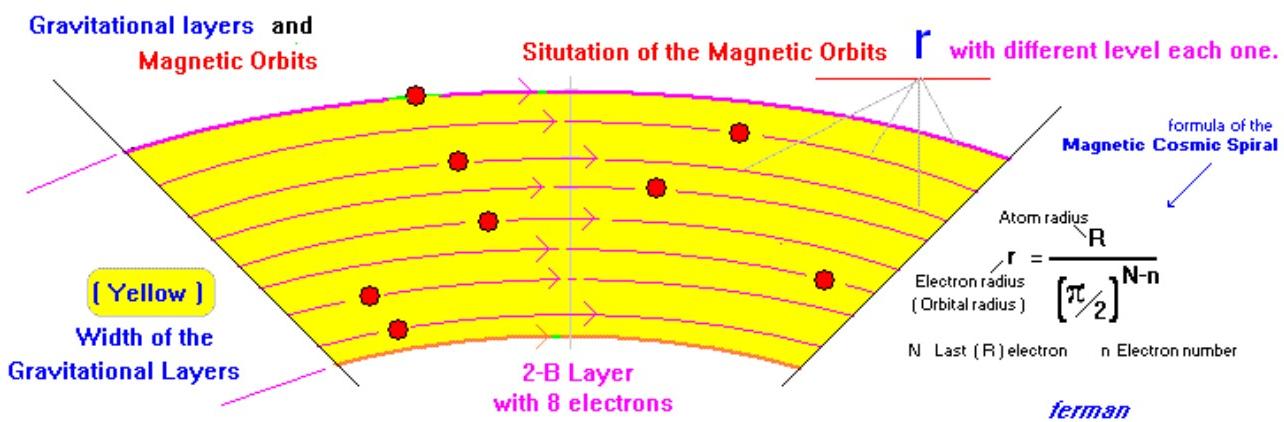
They are the duplication of gravitation layers taken place by each one of the faces ( frontal B and posterior A ) of the atomic nuclei in rotation.

This is because of when rotating the atomic nuclei, each one of the faces (frontal B and posterior A) moves in contrary sense in relation to any external gravitational field  $f$  , and therefore, the lines of gravitation tend to be added in two different blocks, creating two types of superimposed gravitational layers: All the lines belonging to the face A unite forming the layers and gravitation fields A; and the lines of gravitation belonging to the frontal face B unite among them forming the fields and gravitational layers B.



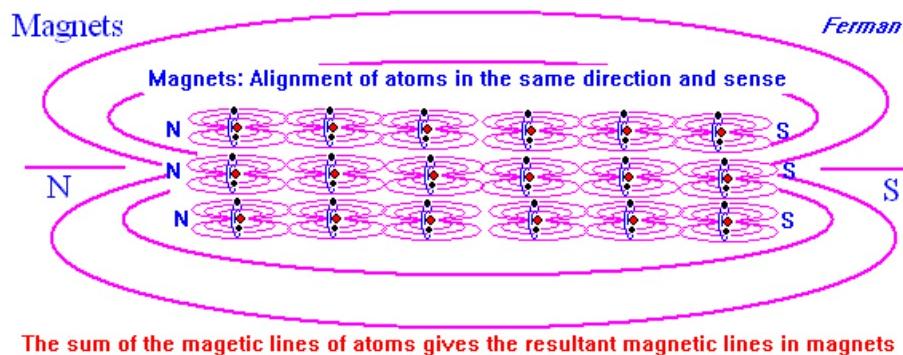
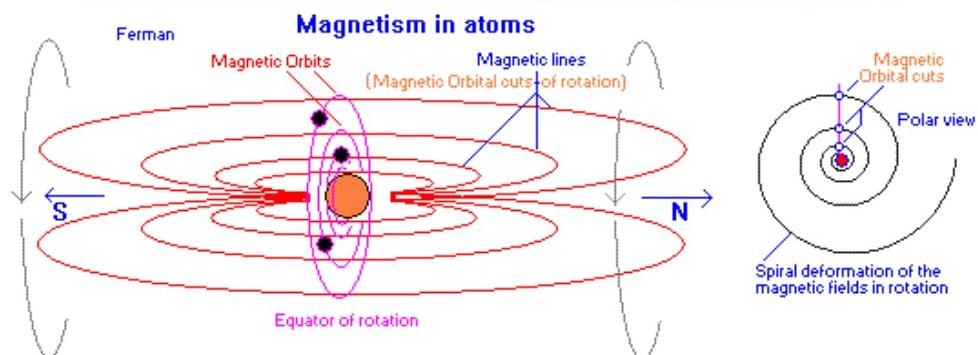
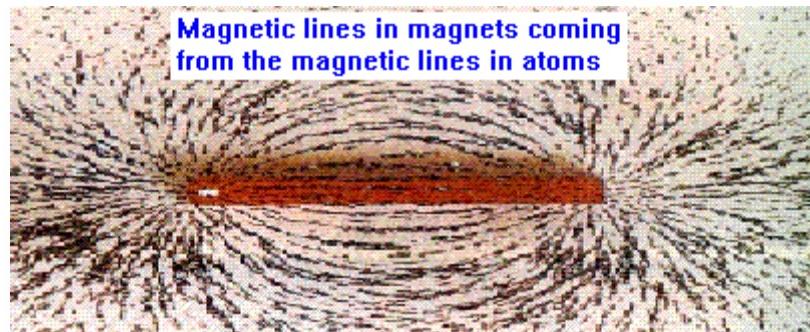
As we can see, the first layer (1-A) doesn't have electrons due to this layer is situated inside the own atomic nucleus.

\* From the Ferman atomic model postulates: In the same sense, in the big atoms due to their great cohesion and compression, their first layers 1-B, 2-A, 2-B etc., also go being described inside the nuclear space and they go getting lost, lasting with electrons alone the exterior gravitational layers.



\* As we can observe, the atomic periphery is structured by means of duplicated Sh(A,B) gravitational layers of great amplitude, containing each one of them several magnetic orbits  $2N^2$  (0, 2; 8,8; 18,18; 32, 32) to different levels and distance from the nucleus, each one of which attracts, captures and fixes to an electron.

Therefore the magnetic orbits are those that have the potential of attraction, distribution and managing of electrons, but not the central nucleus, something similar to the situation of the iron filings around a magnet.



Therefore, the atoms would work in the following way:

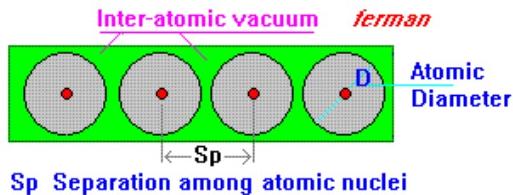
The nuclei create potential magnetic orbits; and the magnetic orbits attract, capture and fix to electrons on them.

# Chart of atomic measures.

Below, I expose table of atomic measures:

Separation is the distance among atomic nuclei in any material.

The interatomic vacuum comes referenced by the coefficient of molecular porosity regarding to that the water has.



Separation and diameter are given in amstrongs.

Symbol --	Name -----	A.Weight - Density ---	Weight (10-24g )---	Coef. Porosity --	Separation - --	Diameter
H	Hydrogen	1	0,00009	1,67	Gas x2	33,37
He	Helium	4	0,000178	6,64	Gas	33,37
----- Second -- Gravity - Layer --- 8 -----						
Li	Lithium	7	0,535	11,62	0,72	2,79
Be	Beryllium	9	1,848	14,94	0,27	2,01
B	Boron	11	2,460	18,26	0,25	1,95
C	Carbon	12	2,267	19,92	0,30	2,07
N	Nitrogen	14	0,001251	23,24	Gas x2	33,37
O	Oxigen	16	0,001429	26,56	Gas x2	33,37
F	Fluorine	19	0,0017	31,54	Gas x2	33,37
Ne	Neon	20,19	0,000899	33,51	Gas	33,37
----- Third -- Gravity - Layer --- 8 -----						
Na	Sodium	23	0,968	38,18	1,33	3,41
Mg	Magnesium	24	1,738	39,84	0,77	2,84
Al	Aluminum	27	2,781	44,82	0,54	2,53
Si	Silicon	28	2,330	46,48	0,67	2,71
P	Phosphorus	31	1,823	51,46	0,94	3,04
S	Sulfur	32	1,960	53,12	0,90	3,00
Cl	Chlorine	35,5	0,00314	58,93	Gas x2	33,37
Ar	Argon	39,95	0,00178	66,32	Gas	33,37
-----Fourth -- Gravity - Layer --- 18 -----						
K	Potassium	39	0,856	64,74	2,54	4,23
Ca	Calcium	40	1,550	66,40	1,44	3,50
Sc	Scandium	44,95	2,985	74,64	0,84	2,93
Ti	Titanum	47,87	4,51	79,49	0,59	2,60
V	Vanadium	50,94	6	84,59	0,47	2,41
Cr	Chromium	52	7,19	86,35	0,40	2,29
Mn	Manganese	54,94	7,21	91,93	0,42	2,33
Fe	Iron	56	7,900	92,96	0,40	2,28
Co	Cobalt	58,93	8,9	97,86	0,37	2,23

Ni	Nickel	59	8,800	97,94	0,37	2,23	1,98
Cu	Copper	63	8,900	104,58	0,39	2,27	2,00
Zn	Zinc	65,4	7,14	108,60	0,51	2,48	2,01
Ga	Galium	70	5,904	116,20	0,66	2,70	2,03
Ge	Germanium	72,64	5,323	120,63	0,76	2,83	2,04
As	Arsenic	75	5,727	124,50	0,73	2,79	2,05
Se	Selenium	79	4,810	131,14	0,91	3,01	2,07
Br	Bromine	80	3,119	132,80	1,42	3,49	2,08
Kr	Krypton	83,80	0,00374	139,11	Gas	33,37	2,09
----- Fifth -----		-- Gravity -	Layer --- 18				
Rb	Rubidium	86	1,532	142,76	3,12	4,53	2,10
Sr	Strontium	87,62	2,64	145,50	1,86	3,81	2,11
Y	Yttrium	88,9	4,472	147,63	1,11	3,21	2,11
Zi	Zirconium	91,22	6,52	151,48	0,78	2,85	2,12
Nb	Neobium	92,9	8,57	154,27	0,60	2,62	2,13
Mo	Molybdenum	96	10,280	159,36	0,52	2,49	2,14
Tc	Technetium	98	11	162,74	0,49	2,45	2,15
Ru	Ruthenium	101	12,45	167,72	0,45	2,38	2,16
Rh	Rhodium	102	12,41	169,38	0,46	2,39	2,16
Pd	Palladium	106	12,023	175,96	0,49	2,44	2,18
Ag	Silver	107	10,500	177,62	0,56	2,56	2,18
Cd	Cadmium	112,4	8,65	186,65	0,72	2,78	2,20
In	Indium	115	7,310	190,90	0,87	2,96	2,21
Sn	Tin	119	7,310	197,54	0,90	3,00	2,22
Sb	Antimony	122	6,697	202,52	1,01	3,12	2,23
Te	Tellurium	128	6,240	212,48	1,14	3,24	2,25
I	Iodine	127	4,940	210,82	1,42	3,49	2,24
Xe	Xenon	131,30	0,00585	217,95	Gas	33,37	2,25
----- Sixth -----		-- Gravity -	Layer --- 32				
Cs	Cesium	133	1,879	220,78	3,93	4,90	2,26
Ba	Barium	137	3,510	227,42	2,17	4,01	2,27
La	Lanthanum	138,9	6,162	230,66	1,26	3,35	2,27
Ce	Cerium	140,116	6,77	232,68	1,15	3,25	2,28
Pr	Proseodymium	140,9	6,77	233,98	1,16	3,26	2,28
Nd	Neodimium	144,24	7,01	239,52	1,14	3,24	2,29
Pm	Prometium	145	7,26	240,79	1,11	3,21	2,29
Sa	Samarium	150,36	7,52	249,69	1,12	3,22	2,30
Eu	Europium	151,96	5,264 *	252,34	1,59 *	3,62 *	2,31
Gd	Gadolinium	157,25	7,9	261,13	1,11	3,21	2,32
Tb	Terbium	158,9	8,23	263,87	1,07	3,17	2,33
Dy	Dysprosium	162,5	8,54	269,85	1,06	3,16	2,34
Ho	Holmium	164,9	8,79	273,83	1,05	3,15	2,34
Er	Erbium	167,26	9,066	277,75	1,03	3,13	2,35
Tm	Thulium	168,9	9,32	280,48	1,01	3,11	2,35
Yb	Ytterbium	173	6,90 *	287,28	1,39 *	3,46 *	2,36

Lu	Lutetium	174,97	9,84	290,56	0,99	3,09	2,37
Hf	Hafnium	178,49	13,31	296,40	0,74	2,81	2,37
Ta	Tantalum	180,95	16,69	300,49	0,60	2,62	2,38
W	Tungsten	184	19,250	305,44	0,53	2,51	2,39
Re	Rhenium	186,2	21,02	309,20	0,49	2,45	2,39
Os	Osmium	190	22,610	315,40	0,47	2,41	2,40
Ir	Iridium	193	22,650	320,38	0,47	2,42	2,41
Pt	Platinum	195	21,500	323,70	0,50	2,47	2,41
Au	Gold	197	19,300	327,02	0,57	2,57	2,41
Hg	Mercury	201	13,600	333,66	0,82	2,90	2,42
Tl	Tallium	204,38	11,85	339,39	0,96	3,06	2,43
Pb	Lead	207	11,600	343,62	1,00	3,10	2,43
Bi	Bismuth	209	9,780	346,94	1,19	3,29	2,44
Po	Polonium	209	9,196	347,07	1,26	3,35	2,44
At	Astatine	210	-----	348,73	-----	-----	2,44
Rd	Radon	222	0,00973	368,52	Gas	33,37	2,46
-----		---Seventh	-- Gravity -	Layer -----	-----	-----	-----
Fr	Francium	223	1,87	370,31	6,65	5,83	2,46
Ra	Radium	226	5,000	375,16	2,52	4,22	2,47
Ac	Actinium	227	10,070	376,82	1,25	3,34	2,47
To	Thorium	232	11,7	385,26	1,11	3,21	2,48
Pa	Protactinium	231	15,37	383,60	0,84	2,92	2,48
U	Uranium	238	18,700	395,08	0,70	2,76	2,49
Np	Neptunium	237	20,45	393,56	0,65	2,68	2,49
Pu	Plutonio	244	19,8	405,19	0,68	2,73	2,50
Am	Americium	243	12	403,53	1,13	3,23	2,50

## Gases

Symbol - Name	---	A.Weight	---	Density	-----	Weight (10-24g)	---	Porosity	-- Separation	---	Diameter
H	Hydrogen	1		0,00009	1,67		-----		33,37		1
He	Helium	4		0,000178	6,64		-----		33,37		1,26
Ne	Neon	20,19		0,000899	33,51		-----		33,37		1,65
Ar	Argon	39,95		0,00178	66,32		-----		33,37		1,85
Kr	Krypton	83,80		0,00374	139,11		-----		33,37		2,09
Xe	Xenon	131,30		0,00585	217,95		-----		33,37		2,25
Rd	Radon	222		0,00973	368,52		-----		33,37		2,46
N	Nitrogen	14		0,001251	23,24		-----		33,37		1,55
O	Oxigen	16		0,001429	26,56		-----		33,37		1,59
F	Fluorine	19		0,0017	31,54		-----		33,37		1,63
Cl	Chlorine	35,5		0,00314	58,93		-----		33,37		1,81

**Porosity Coefficient** **Coeficiente de Porosidad**

*fermen* Regarding to Water *Respecto al agua*

$$\text{Porosity Cf} = \left( \frac{S_p}{W_{sp}} \right)^3$$

**S<sub>p</sub>** Element separation      **W<sub>sp</sub>** = 3,1 Å  
Water separation